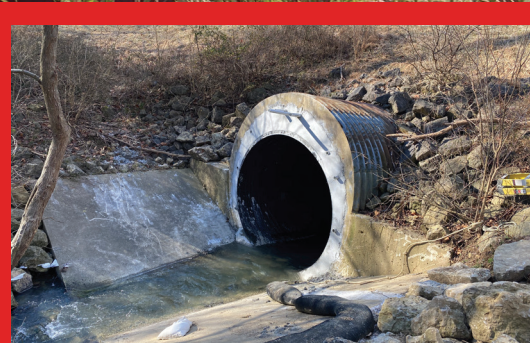


# Spirolite

## LARGE DIAMETER CULVERT LINING SYSTEMS



1-800-CULVERT  
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ISCO



# Spirolite

## Large Diameter Culvert Lining Systems



**State Department of Transportation, counties, and municipalities are facing a critical problem. Culverts installed 40 to 50 years ago are failing at an alarming rate nationwide. Thousands of corrugated metal culverts are so significantly rusted that a danger of sink holes, road collapse, or flooding exists. Concrete culverts have cracked or pulled apart at the joint, creating similar dangerous scenarios. Conventional repair methods of the past have been to dig and replace the failed pipe. Spirolite is one of the few companies that can offer structural, no-dig rehabilitation solutions for culverts of all sizes.**

Spirolite's Large Diameter high density polyethylene (HDPE) Lining System is the ideal solution for failing metal and concrete culverts of any size, including oval or arched. Spirolite is a cost-effective, no-dig solution with field-tested benefits. Years of experience and thousands of culvert projects have proven that rehabbing a culvert with the Spirolite system is the better solution. Using profile wall HDPE pipe, culverts rehabilitated using the Spirolite system actually outperform the original structures. The low resistance of flow (Manning's N of 0.009) of HDPE pipe allows for greater flows. The use of a gasketed bell spigot joint assures a watertight seal, easily meeting the requirements of ASTM D3212. Also, HDPE is one of the most corrosion- and abrasion-resistant pipe materials available. Which means you can fix it, forget it, and move on to the next challenge knowing Spirolite is a long-term solution.



Spirolite's Large Diameter line is constructed of profile wall HDPE pipe meeting the ASTM F894 direct-bury sewer pipe requirements. These products offer all of the benefits of our solid wall line but in bigger diameters. The use of profile wall pipe provides lower weight answers at lower costs for even your largest culvert rehab needs. From our solid wall HDPE to our profile wall HDPE, the products offered by ISCO have been selected based on the reputation of the manufacturers, the quality of their products and the needs of our customers.

Spirolite's large diameter options are available in lengths from up to 20 feet long with special lengths available upon request. The pipe is joined together then pushed into the full length of the existing culvert. Unlike other rehab systems, the annular space between the old pipe and the new Spirolite is filled with a low-density cellular grout which fills any voids between the roadway and the culvert, delivering a truly 'rehabbed' culvert. Spirolite is also easy to install. Nearly all of the culvert renewal can be done off road with minimum disturbance to the right-of-way and without road closures.



#### Large Diameter HDPE Piping Systems Offer:

- Corrosion Resistance
- Light Weight
- Multiple Jointing Options
- Hydraulic Efficiency
- 100-Year Plus Service Life
- Impact Resistance
- 100% Leak-Free Restrained Join
- Flexibility of Design
- Environmental Protection
- Chemical Resistance
- Cost Effectiveness
- Abrasion Resistance
- High Strength
- Long-Term Durability

#### Spirolite is ideal for rehabilitating existing culvert sites, especially:

- Roadways
- Railroads
- Levees
- Fish Passageways



Culvert Size CMP ID	CMP Flow GPM	CMP Flow CFS	Spirolite ID Size	Spirolite OD Size	Spirolite Flow GPM	Spirolite Flow CFS	% of Flow
60"	20,019.39	44.6	48"	52.88"	28,990.58	64.59	144%
66"	25,813.40	57.51	54"	59.3"	39,689.96	88.43	153%
72"	32,555.71	72.53	57"	62.88	45,848.00	102.20	141%
72"	32,555.71	72.53	60"	65.57"	52,567.33	117.12	161%
78"	40,303.04	89.8	63"	68.46"	59,873.00	133.40	149%
78"	40,303.04	89.8	66"	72.82"	67,781.34	151.02	168%
84"	49,110.49	109.42	72"	78.65"	85,485.46	190.46	174%
90"	59,031.83	131.52	78"	83.6"	105,828.54	235.79	179%
96"	70,119.50	156.23	84"	91.45"	128,955.35	287.31	183%
102"	82,424.84	183.64	84"	91.45"	128,955.35	287.31	156%
108"	95,998.09	213.88	96"	103.8"	184,121.23	410.22	191%
114"	110,888.55	247.06	96"	103.8"	184,121.23	410.22	166%
120"	127,144.58	283.28	96"	103.8"	184,121.23	410.22	144%
126"	144,813.72	322.65	96"	103.8"	184,121.23	410.22	127%
126"	144,813.72	322.65	108"	116.50"	252,028.00	561.60	174%
132"	169,942.72	365.27	120"	128.6"	333,858.84	743.84	203%
138"	184,577.59	411.24	120"	128.6"	333,858.84	743.84	180%
144"	206,763.66	460.67	120"	128.6"	333,858.84	743.84	161%
150"	230,545.60	513.66	120"	128.6"	333,858.84	743.84	144%

\*Based on .1% Slope

## Spirolite has Oval Pipe Options

Since one-third of existing culverts are arched, Spirolite again has come up with a solution: oval pipe. It has the same benefits as round Spirolite, yet made for a better fit into an existing arched culvert.

The Spirolite Culvert Lining System actually outperforms both the round and oval concrete and corrugated metal pipes it rehabilitates. Lightweight, flexible, durable HDPE has an indefinite service life and the Spirolite culvert lining joining system assures a water-tight seal at all joints.

